AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A semiconductor apparatus, comprising:

a semiconductor substrate;

a field oxide film formed over a surface of the semiconductor substrate, the field oxide film having an aperture section;

a pad electrode, having an aperture section formed therethrough, the pad electrode being formed over the field oxide film so as to overlap the field oxide film when perpendicularly viewing the semiconductor substrate; and

a penetration electrode electrically connected to the pad electrode, the penetration electrode being provided so as to pass through each of (a) ~~via~~ the aperture section of the field oxide film, ~~via~~ (b) a hole formed in the semiconductor substrate, and ~~via~~ (c) the aperture section of the pad electrode,

the hole in the semiconductor substrate being formed entirely within the aperture section of the field oxide film, when perpendicularly viewing the semiconductor substrate, so that an opening of the hole is smaller than the aperture section of the field oxide film.

2. (Previously presented) The semiconductor apparatus as set forth in claim 1, wherein: the penetration electrode is formed in a field area of the surface of the semiconductor substrate.

3. (Canceled)

4. (Previously presented) The semiconductor apparatus as set forth in claim 1, wherein: the aperture section of the field oxide film is formed in the aperture section of the pad electrode, when perpendicularly viewing the semiconductor substrate.

5. (Previously presented) The semiconductor apparatus as set forth in claim 1, wherein: an insulating film is formed on an internal surface of the hole between the internal surface of the hole and a sidewall of the penetration electrode.

6. (Original) The semiconductor apparatus as set forth in claim 5, wherein: the penetration electrode includes an electrically conductive film on the insulating film that is formed on the internal surface of the hole.

7. (Original) The semiconductor apparatus as set forth in claim 1, wherein: the penetration electrode includes a hole-filling section formed in the hole.

8. (Previously presented) The semiconductor apparatus as set forth in claim 1, wherein: a hole-filling section is formed in the hole, and the hole-filling section is made of an insulating material.

9. (Original) The semiconductor apparatus as set forth in claim 7, wherein: the hole-filling section is made of an electrically conductive material.

10-16. (Canceled)

17. (Previously presented) The semiconductor apparatus of claim 1, wherein the pad electrode is formed so that there is no overlap with the hole when perpendicularly viewing the semiconductor substrate.

18. (Currently amended) A penetration electrode for use in a semiconductor apparatus, the semiconductor apparatus comprising a semiconductor substrate, a field oxide film formed over a surface of the semiconductor substrate, the field oxide film having an aperture section that is an opening through the field oxide film, and a pad electrode formed over the field oxide film so as to overlap the field oxide film when perpendicularly viewing the semiconductor substrate; wherein:

the pad electrode has an aperture section formed therethrough,

the penetration electrode is electrically connected to the pad electrode, the penetration electrode being provided so as to pass through each of ~~via~~ the aperture section of the field oxide film, ~~via~~ a hole formed in the semiconductor substrate, and ~~via~~ the aperture section of the pad electrode,

the hole being formed entirely within the aperture section of the field oxide film, when perpendicularly viewing the semiconductor substrate, so that an opening of the hole is smaller than the aperture section of the field oxide film; and

the penetration electrode being formed in a field area of the surface of the semiconductor substrate.

19. (Currently amended) A penetration electrode for use in a semiconductor apparatus, the semiconductor apparatus comprising:

a semiconductor substrate,

a field oxide film formed over a surface of the semiconductor substrate, the field oxide film having an aperture section that is an opening through the field oxide film,

a pad electrode, having an aperture section formed therethrough, the pad electrode being formed over the field oxide film so as to overlap the field oxide film when perpendicularly viewing the semiconductor substrate; wherein:

the penetration electrode is electrically connected to the pad electrode, the penetration electrode being provided so as to pass through each of ~~via~~ the aperture section of the field oxide film, ~~via~~ a hole formed in the semiconductor substrate, and ~~via~~ the aperture section of the pad electrode, and

the hole being formed entirely within the aperture section of the field oxide film, when perpendicularly viewing the semiconductor substrate, so that an opening of the hole is smaller than the aperture section of the field oxide film.

20. (Previously presented) The penetration electrode of claim 19, wherein the aperture section of the field oxide film is formed in the aperture section of the pad electrode, when perpendicularly viewing the semiconductor substrate.

21. (Previously presented) The semiconductor apparatus of claim 4, wherein the aperture section in the pad electrode is larger than the aperture section in the field oxide film, when perpendicularly viewing the semiconductor substrate.

22. (New) The semiconductor apparatus of claim 5, wherein the insulating film is in direct contact with the field oxide film.

23. (New) The semiconductor apparatus of claim 1, wherein the pad electrode is formed directly on and contacting the field oxide film.

24. (New) The semiconductor apparatus of claim 1, wherein the penetration electrode extends through the aperture section of the pad electrode so that the penetration electrode is located at elevations both above and below the pad electrode.

25. (New) The penetration electrode of claim 18, wherein the penetration electrode extends through the aperture section of the pad electrode so that the penetration electrode is located at elevations both above and below the pad electrode.

26. (New) The penetration electrode of claim 19, wherein the penetration electrode extends through the aperture section of the pad electrode so that the penetration electrode is located at elevations both above and below the pad electrode.

27. (New) The semiconductor apparatus of claim 1, wherein the aperture section of the pad electrode is a hole formed through the pad electrode, such that the aperture section is surrounded by the pad electrode when perpendicularly viewing the semiconductor substrate.

28. (New) A semiconductor apparatus, comprising:

a semiconductor substrate;

a field oxide film formed over a surface of the semiconductor substrate, the field oxide film having an aperture section;

a pad electrode formed over the field oxide film so as to overlap the field oxide film when perpendicularly viewing the semiconductor substrate; and

a penetration electrode electrically connected to the pad electrode, the penetration electrode being provided so as to pass through each of the aperture section of the field oxide film, and a hole formed in the semiconductor substrate, and

wherein the hole in the semiconductor substrate is formed entirely within the aperture section of the field oxide film, when perpendicularly viewing the semiconductor substrate, so that an opening of the hole is smaller than the aperture section.